

# Grease compatibility

**What is grease incompatibility?** Mixing different greases, especially of different thickener types, could bring about chemical or structural interactions between the thickener or additive systems of the different greases. This could lead to ineffective lubrication, damaging the lubricated components or even cause equipment failure.

**How do I know if my greases are incompatible?** Most of the time, grease mixtures will exhibit a change in consistency relative to that of the individual pure greases. This tendency will be more pronounced as the operating temperature or the rate of shearing of the grease mixture increases. Incompatible greases may also exhibit abnormal oil separation or “bleeding” at higher temperatures.

**What happens if I mix incompatible greases together?** Incompatible mixing of greases in application could lead to grease or oil leakage, premature aging or insufficient oil bleed in the contacting zones. Although unlikely but not unheard of, the greases’ performance additives may act antagonistically, adversely affecting lubrication functions such as protection against friction, wear, rust or corrosion.

Below is a general guide to determining the compatibility between different thickener types.

	Aluminum Complex	Calcium Complex	Calcium Sulfonate	Lithium 12-hydroxy	Lithium Complex	Polyurea	Clay
Aluminum Complex	C	I	M	I	I	M	I
Calcium Complex	I	C	M	I	M	C	I
Calcium Sulfonate	M	M	C	M	C	I	I
Lithium 12-hydroxy	I	I	M	C	C	M	I
Lithium Complex	I	M	C	C	C	M	I
Polyurea (shear stable)	M	C	I	M	M	C	M
Clay	I	I	I	I	I	M	C

■ Completely compatible   
 ■ Moderately compatible   
 ■ Incompatible

**What we recommend:** If mixing different greases is the only option, it is recommended to run grease compatibility tests first. If deemed incompatible, purge as much as possible of the old grease, then re-grease more frequently to purge all the old grease out of the bearing.

